TABLE OF CONTENTS:

SAVKIN, Yu.G.; NIKOLAYEV, A.A.

Investigating the operation of an electric servosystem with a two-position copying device and electromagnetic clutches in feed drives. Nauch.dokl.vys.shkoly; mash. i prib. no.1:42-50 '59. (MIRA 12:8)

1. Stat'ya predstavlena kafedroy "Mekhanicheskaya obrabotka i metallorezhushchiye stanki" Moskovskogo aviatsionnogo tekhnologicheskogo instituta.
(Machine tools--Numerical control) (Electric controllers)

3/112/59/000/012/087/097
A052/A001

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1959, No. 12, p. 258, # 25725

AUTHORS: Nikolayev, A.A., Kersha, V.O., Polonskiy, A.B.

TITLE: Television Translation Station

PERIODICAL: Tr. Televizion. fil.-labor., 1956, No. 2, pp. 50-67

TEXT: Subscribers' unit in the television translation station developed by МТФЛ (MTFL) contains the minimum of functions. The video signal, line and frame scan signals as well as the sound accompaniment are led to it. An electrostatic deflection tube is used. For experimental testing 3 stations with 200 subscribers' units each have been prepared. The video signal transmission is realized by means of a coaxial cable with the length of a tap to the subscriber of ≤ 9 m. The pass-band is 4 Megacycles. Line and frame signals are translated over 2-wire lines. The interference of video signal and line scan chains with the broadcast reception is considered as well as the measures to eliminate it. A short description of the station is given.

V.F.A.

Translator's note. This is the full translation of the original Russian abstract.

Card 1/1

NIKOLAYEV, A.A., inzh.

Development of thermal networks. Energetik 12 no.3:4-7 Mr '64. (MIRA 17:4)

KULIKOV, F.V., kand.tekhn.nauk; KIZILEVICH-KELEVICH, G.V., kand.tekh.nauk; NIKOLAYEV, A.A., inzh.

Effect of tin on the properties of copper solder. Svar. proizv. no.2:14-16 F '63. (MIRA 16:2)

1. Moskovskiy energeticheskiy institut.
(Solder and soldering)

NIKOLAYEV, A.A., inzh. (Fastov, Kiyevskoy obl.)

Joining gas pipelines by gluing. Stroi. truboprov. 7 no.8: 23-24 Ag '62. (MIRA 15:9)
(Gas, Natural--Pipelines) (Pipe fitting) (Epoxy resins)

AID P - 2406

Subject : USSR/Electricity

Card 1/1 Pub. 26 - 5/33

Authors : Vindman, R. N., and Nikolayev, A. A., Engrs.

Title : Problems of heat supply to cities and industries

Periodical : Elek sta 5, 18-21, My 1955

Abstract : The article discusses problems connected with the building of heat and electric power plants. Usually, the capacity of these plants is 100,000 to 150,000 kw and they are located at some distance from residential areas. The interconnection of the heat supply network is analyzed, and the erection of several plants to supply one city is discussed. More study of the problem is recommended.

Institution: None

Submitted : No date

NIKOLAYEV, A A

SOV/[illegible]

AUTHOR: Leont'yeva, T.K., Candidate of Technical Science
Moiastyrskaya, A.R., Engineer

TITLE: An All-Union Conference on the Future Development of District Heating in the USSR (Vsesoyuznoye soveshchaniye po voprosam dal'neyshego razvitiya teplofikatsii SSSR)

PERIODICAL: Teploenergetika, 1958, No 11, pp 90-92 (USSR)

ABSTRACT: On the 11th - 13th July, 1958, there was held in Moscow an All-Union Conference on the Further Development of District Heating in the Soviet Union, organised by the Moscow Directorate of the Scientific Technical Society of the Power Industry and the District Heating Section of the High Temperature Steam Commission of the Power Institute, Academy of Sciences (USSR). The Conference was attended by 240 representatives from 16 cities. Design, Scientific research, teaching and other organisations, heat and electric power stations, GOSPLAN USSR and Councils of National Economy were represented. Chinese and Polish power engineers also participated. Reports

Card 1/6

An All-Union Conference on the Future Development of District Heating in the USSR

were read on the future development of district heating for 1959-65, on the effectiveness of district heating and its main lines of development, on reducing the construction cost of district heating equipment and on related topics. Engineer B.I.Duba of the Ministry of Electric Power Stations, reviewed the present state of heat supply, its expected development and the tasks of research and design organisations in this matter. S.F.Kop'yev, Doctor of Technical Science of the Power Institute, Academy of Sciences USSR, stated in his report that in the USSR district heating is the main method of heat supply to industry and towns. There is considerable lag in the application of district heating in some of the older towns. With increased availability of large power stations, freer supply of gas oil and cheap fuel, district-heating schemes are no longer so easy to justify. The Power Institute, Academy of Sciences USSR, has made a technical economic analysis of the subject based on determinations of the pay-off

An All-Union Conference on the Future Development of District Heating in the USSR

time of the capital expenditure. The conclusions are presented and it is considered that district heating is still to be advised even when large power systems are available. Data are given about the smallest sizes of power station in which district heating is advisable. The report indicates the main lines of development of heat- and electric-power stations. L.A. Melentyev Doctor of Economic Science of the Leningrad Engineering Economic Institute and the Leningrad Laboratory of the Power Institute, Academy of Sciences USSR, described the great increase in district heating during 1950-1957. Much can still be done to make district heating more economic. In a number of existing power stations, little benefit is obtained from combined power- and heat-supply because of delays in the construction of heating networks and excessive cost of district-heating equipment. The utilisation of heat in industry is increasing very

An All-Union Conference on the Future Development of District Heating in the USSR

rapidly by approximately 50% in five years and it is therefore, important to avoid the use of uneconomic industrial boiler houses. During the next seven years it will be necessary to increase the output of heat for industrial use from heat and electric-power stations by a factor of at least 2½. A.A.Nikolayev, Engineer of Teploelektroproyekt, in his report considered the main methods of reducing the cost of construction of district-heating stations and heating systems. Power stations can be made larger by supplying both domestic and industrial heat requirements. Water-heating and low-pressure steam boilers should be used to cover peak loads. A.I.Lozhkin, Doctor of Technical Science of the Central Boiler Turbine Institute, pointed out that with the increased importance of gas as a power fuel it was becoming possible to construct heat and electric power-stations with combined steam/gas installations and that by using the steam/gas cycle the amount of electricity generated in connection with heat supply could be

An All-Union Conference on the Future Development of District Heating in the USSR

increased by 30 - 50%. The most important part of the discussion in the conference was on the papers of Kopyev and Melentyev. The Conference noted the achievements in district heating during the last 34 years but listed a number of defects. The Conference agreed with the proposed rate of increase of heat supply from heat and electric power-stations. The importance of building larger stations and avoiding the construction of industrial boiler houses was emphasised. Recommendations were made on the design of rational types of district-heating turbines and boilers for regional and peak boiler houses. The conference asked GOSPLAN and the Sovnarkhozy (Councils of National Economy) to plan the development of power

SOV/96-58-11-13/21

An All-Union Conference on the Future Development of District Heating in the USSR

for the economic regions with proper allowance for combined electricity, heat and gas supply for industrial, domestic and agricultural requirements.

Card 6/6

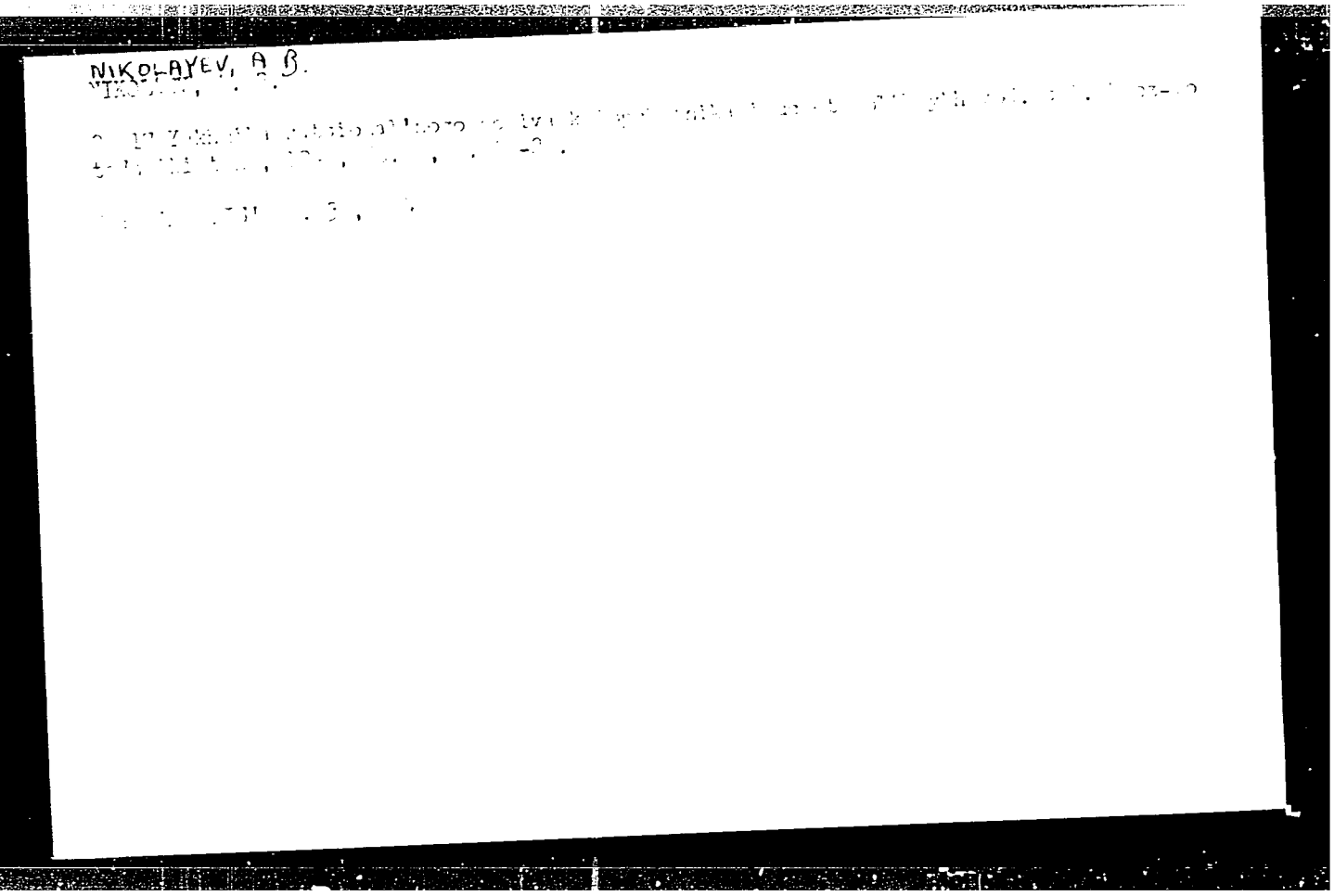
DZEVANSKIY, Yu.K.; DODIN, A.L.; KONIKOV, A.Z.; KRASNYY, L.I.; MAN'KOVSKIY, V.K.; MOSHKIN, V.N.; LYATSKIY, V.B.; NIKOL'SKAYA, I.F.; SALOP, L.I.; SALUN, S.A.; BABKIN, M.I.; RAVICH, M.G.; POSPELOV, A.G.; NIKOLAYEV, A.A.; IL'IN, A.V.; BUZIKOV, I.P.; MASLENNIKOV, V.A.; NEYELOV, A.N.; NIFITINA, L.P.; NIKOLAYEV, V.A.[deceased]; OBRUCHEV, S.V.; SAVEL'YEV, A.A ; SEDOVA, I.S.; SUDOVIKOV, N.G.; KHIL'TOVA, V.Ya.; NAGIBINA, M.S.; SHEYNMANN, Yu.M.; KUZNETSOV , V.A.; KUZNETSOV, YU.A.; BORUKAYEV, R.A.; LYAPICHEV, G.F.; NALIVKIN, D.V., glav. red.; VERESHCHAGIN, V.N., zam. glav. red.; MENNER, V.V., zam. glav. red.; OVECHKIN, N.K., zam. glav. red.[deceased]; SOKOLOV, B.S., red.; SHANTSER, Ye.V., red.; MODZALEVSKAYA, Ye.A., red.; CHUGAYEVA, M.N., red.; GROSSGEYM, V.A., red.; KELLER, B.M., red.; KIPARISOVA, L.D., red.; KOROBKOV, M.A., red.; KRASNOV, I.I., red.; KRYMGOL'TS, T.Ya., red.; LIBROVICH, L.S., red.; LIKHAREV, B.K., red.; LUPPOV, N.P., red.; NIKIFOROVA, O.I., red.; POLKANOV, A.A., red.[deceased]; RENGARTEN, V.P., red.; STEPANOV, D.L., red.; CHERNYSHEVA, N.Ye., red.; SHATSKIY, N.S., red.[deceased]; EBERZIN, A.G., red.; SMIRNOVA, Z.A., red.izd-va; GUROVA, O.A., tekhn. red.

[Stratigraphy of the U.S.S.R. in fourteen volumes. Lower Pre-Cambrian] Stratigrafiia SSSR v chetyrnadtsati tomakh. Nizhnii Dokembrii. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geologii i okhrane nedr. Pt. 1 (Asiatic part of the USSR) 1963. 396p.

MASALOVICH, G.I., kand. tekhn. nauk, dots.; GALKIN, I.N., kand. tekhn. nauk, dots.; KOGAREV, A.I., kand. tekhn. nauk, dots.; NIKOLAYEV, A.A., assistent

[Outline of lectures in the general course on the technology of metals] Konspekt lektsii po obshchemu kursu tekhnologii metallov. Moskva, Pt.3. Sec.6. [Metal cutting] Obrabotka metallov rezaniem. 1963. 235 p. (MIRA 17:?)

1. Moscow. Energeticheskiy institut.



AUTHORS: Nikolayev, A.B.; Kelli, A.Ch. SOV/26-58-12-36/44

TITLE: Once More About the Wild Small-Fruit Plants of the North (Yeshchë raz o dikikh yagodnykh rasteniyakh severa)

PERIODICAL: Priroda, 1958, Nr 12, pp 121 - 122 (USSR)

ABSTRACT: The article deals with a dispute on the possible and prospective selection and cultivation of wild small-fruit plants in the USSR's northern districts. A.P.Nikolayev agrees with the views expressed by agronomist V.F. Kondrat'yev stating that little or nothing is done with respect to a planned provision of the population of the Soviet North with small fruit. Judging from his relevant experience in the Yakutan Oblast, Nikolayev outlines the value of such small-fruit plants as the bog bilberry (Vaccinium uliginosum), the European blueberry (Vaccinium myrtillus), such small northern raspberries as the cloudberry (Rubus chamaemorus) and Rubus arcticus, the dog rose (Rosa canina), the bird cherry (Cerasus padus), diverse mountain ash (Sorbus) species, such as Sorbus anadyrensis Kom., and the edible honey suckle (Lonicera edulis Turcz). He points out that the bog bilberry and the European blueberry have been successfully selected and cultivated in Canada and Alaska, that also the other plants would be excellent objects for selection and cultivation, that they

Card 1/2

Once More About the Wild Small-Fruit Plants of the North

are in demand on the local markets, but that apparently no efforts are made toward cultivation by the institutions concerned. These statements are refuted by A.Ch. Kelli who quotes A.V. Bolonyayev. Both hold that there are enormous amounts of these berries and fruit in the northern regions, which more than amply cover the needs of the population If collecting and distribution would be organized efficiently, in the Sakhalin, Kamchatka and Magadan Oblasts, no additional cultivation would be needed in the near future. Moreover, important capital investment would be necessary for the establishment of the plantations, and careful preliminary biological, botanical and agricultural research and experimentation over an extended period of time would be required. There are 2 Soviet references.

ASSOCIATION: Magadanskaya kompleksnaya zemleustroitel'naya ekspeditsiya Ministerstva sel'skogo khozyaystva RSFSR (The Magadan Joint Expedition for Land Exploitation of the Ministry of Agriculture of the RSFSR). Glavnyy botanicheskiy sad AN SSSR (The Main Botanical Garden of the AS USSR)

NIKOLAYEV, A.B.

The primrose is a dangerous plant. Priroda 49 no. 12:116-117 D '60. (MIRA 13:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh i aromaticheskikh rasteniy, Moskva.
(Primroses)

NIKOLAYEV, A.B.

Utilization of wild medicinal, edible, forage and other economically precious plants of the Far North of the U.S.S.R. Probl. Sev. no.6:195-206 '62. (MIRA 16:8)

1. Vsesoyuznyy institut lekarstvennykh i aromaticheskikh rasteniy.
(RUSSIA, NORTHERN—BOTANY, ECONOMIC)

NIKOLAYEV, A.B.

Reindeer moss as fodder. Priroda 51 no.5:109-111 My '62.
(MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut lekarstvennykh i aromaticheskikh rasteniy, Moskva.
(Chukchi Peninsula--Lichens) (Reindeer--Feedings and feeds)

NIKOLAYEV, A.B., botanik.

Black-berried rowan tree. Zdorov'e 9 no.1: 31 '63. (MIRA 16:7)
(Rowan)

NIKOLAYEV, A.D.

NIKOLAYEV, A.D., inzhener; STUPIN, A.K., redaktor; EYFEL', A.I., inzhener, redaktor obshchetekhnicheskoy literatury

[Catalog of spare parts for the motorcycle MLA] Katalog zapisnykh chastei mototsikla MLA. Moskva, Gos. nauchno-tekhn. izd-vo mash'nostroit. i sudostroit. lit-ry, 1954. 115 p. (MLRA 7:9)

1. Russia (1923- U.S.S.R.) Ministerstvo mashinostroyeniya. (Motorcycles--Catalogs)

NIKOLAYEV, A.D.

World data centers. Mezhdunar.geofiz.god no.4:9-23 '58.
(MIRA 11:11)

(International Geophysical Year, 1957-1958)

NIKOLAYEV, A.D.; SALTYKOVA, T.I.

World center for the collection of geophysical data. Vest. AN SSSR 31 no.8:81-84 Ag '61. (MIRA 14:8)
(Geophysics)

NIKOLAYEV, A.D.

67-6-8/23

AUTHORS: Yevdokimchik, Kh.I., Engineer,
Nikolayev, A.D., Engineer

TITLE: Modernization of the Oxygen Compressors of the Type 2PK-1.5/220 (Modernizatsiya kislorodnykh kompressorov 2PK-1.5/220)

PERIODICAL: Kislorod, 1957, Nr 6, pp. 27-28 (USSR)
Received: April 7, 1958

ABSTRACT: In the introduction a short description is given of the "antiquated" oxygen compressors of the type 2PK-1.5/220, with which most oxygen stations are now equipped in the USSR. It is mentioned as a disadvantage of these compressors that their construction does not meet the demands of practical use. The cylinder muffs of these compressors must frequently be exchanged, and because of the disadvantageous arrangement of the cylinders, it takes much time to repair them, which often causes the oxygen supply of factories to be interrupted. The attempt was made to "modernize" these compressors. According to the drawing attached, the "modernized" compressor consists of four cylinders which are arranged in two pairs so that step I is connected with step III, and step II with step IV. Both pairs of cylinders are mounted on cylinder stands; in the interior special

Card 1/2

packings are fitted for the piston shafts. In steps I and II the cylinder liners are made from cast iron, and the pistons from bronze. Each of these pistons has 6 gasket rings made of special cast iron. It is not mentioned here from what material steps III and IV are made, and it is merely said that the piston of step III has 8, and that step IV has 12 gasket rings, which are in both cases made of a special brass alloy (L M_4OC 58-2-2-2). The gasket rings of the fourth step consist of two parts of different diameter, by which the packing effect is increased. A soap emulsion is used as lubricant for all four steps. As mentioned in conclusion, this new "modernized" type of oxygen compressor p:oved to be successful in operation but it still has some constructional faults which must be taken into account when a new model is produced, as e.g. the fact that 2 cylinders are arranged one above the other makes the changing of piston rings very complicated. There is 1 figure.

AVAILABLE: Library of Congress

Card 2/2

KOZLOV, N.S.; NIKOLAYEV, A.D.

Catalytic synthesis of β-arylamino ketones. Zhur.ob.khim. 31 no.12:3894-3896 D '61. (MIRA 15:2)

1. Permskiy sel'skokhozyaystvennyy institut imeni D.N.Pryanishnikova.
(Ketone)

KOZLOV, N.S.; NIKOLAYEV, A.D.

Catalytic condensation of Schiff bases with malonic ester. Zhur. ob.khim. 33 no.7:2387-2389 Jl '63. (MIRA 16:8)

1. Permskiy sel'skokhozyaystvennyy institut imeni D.N.Pryanishnikova.
(Schiff bases) (Malonic acid)

KOZLOV, N.S.; NIKOLAYEV, A.D.

Catalytic synthesis of antipyrine derivatives. Dokl. AN SSSR 154 no.6: 1382-1384 F '64. (MIRA 17:2)

1. Permskiy sel'skokhozyaystvennyy institut im. D.N.Pryanishnikova. Predstavleno akademikom A.A.Balandinym.

NIKOLAYEV, A.F., kandidat tekhnicheskikh nauk; PANOV, V.I., inzhener.

Supplementary planetary gear sets used in the S-80 tractors.
Stroi.i dor.mashinostr. 2 no.7:19-20 Jl '57. (MLRA 10:7)
(Tractors) (Automobiles--Transmission devices)

NIKOLAYEV, A.F.

NIKOLAYEV, A.F., kandidat tekhnicheskikh nauk.

Machine for laying communication cables in frozen ground. Mekh. trud. rab. 11 no.4:38-39 Ap '57. (MLRA 10:6)
(Electric cables) (Frozen ground) (Earthmoving machinery)

NIKOLAYEV, A.F., kand.tekhn.nauk; RUKAVISHNIKOV, S.V., kand.tekhn.nauk

The LFM-P-34 ice-cutting machine. Biul.tekh.-ekon.inform. no.9: 77-79 '61. (MIRA 14:9)

(Ice on rivers, lakes, etc.)

NIKOLAYEV, A.F., kand.tekhn.nauk; RUKAVISHNIKOV, S.V., kand.tekhn.nauk; ZUBIN, I.V., insh.

Reducing gear with power take-off for DT-54A tractors. Stroi. i dor. mash. 6 no.9:23-24 S '61. (MIRA 14:10)
(Tractors--Engines)

NIKOLAYEV, A.P., kand.tekhn.nauk; RUKAVINSHNIKOV, S.V., kand.tekhn.nauk; FEDIN, I.V., inzh.

The FTK-GPI-38 cutting trencher. Stroi. i dor. mash. 7 no.7:5-8 Jl '62. (MIRA 15:7)

(Excavating machinery)

NIKOLAYEV, A.F., kand. tekhn. nauk; FEDIN, I.V., inzh.; PANOV, V.I. inzh.; POL', L.R., inzh.

DFM-GPI-1 and DFM-GPI-2 machines for frozen ground. Stroi i dor. mash. 8 no.12:5-6 D'63 (MIRA 17:7)

L 41189-65 EWT(1)/T GW
ACCESSION NR: AP5001878 S/0286/64/000/023/0030/0030

AUTHORS: Nikolayev, A. F.; Solov'yev, S. S. 7 B

TITLE: Machine for providing snow-ice covering on roads and airfields. Class 19, No. 166727

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1964, 30

TOPIC TAGS: ice, road, snow

ABSTRACT: This Author Certificate introduces a machine for making snow-ice layers on roads and airfields, consisting of a frame (to be towed) supported on the working surface by a front ski and with the working apparatus located at the rear part of the frame. It contains a vibration plate and cutter in a heating chamber into which hot gases are introduced from the combustion chamber for melting the snow cover. To obtain a higher density and uniformly high ice covering and to increase its load carrying properties, a frame is located between the cutter and the vibration plate which can be moved vertically by, for example, a screw mechanism. On a platform, connected to this frame with spring shock absorbers, a vibrator is mounted which provides vertical vibrations to vertical streamlined stays which support a hinged deep-compacting heating plate. Hot gases from the combustion

Card 1/2

L 41189-65

ACCESSION NR: AP5001878

0

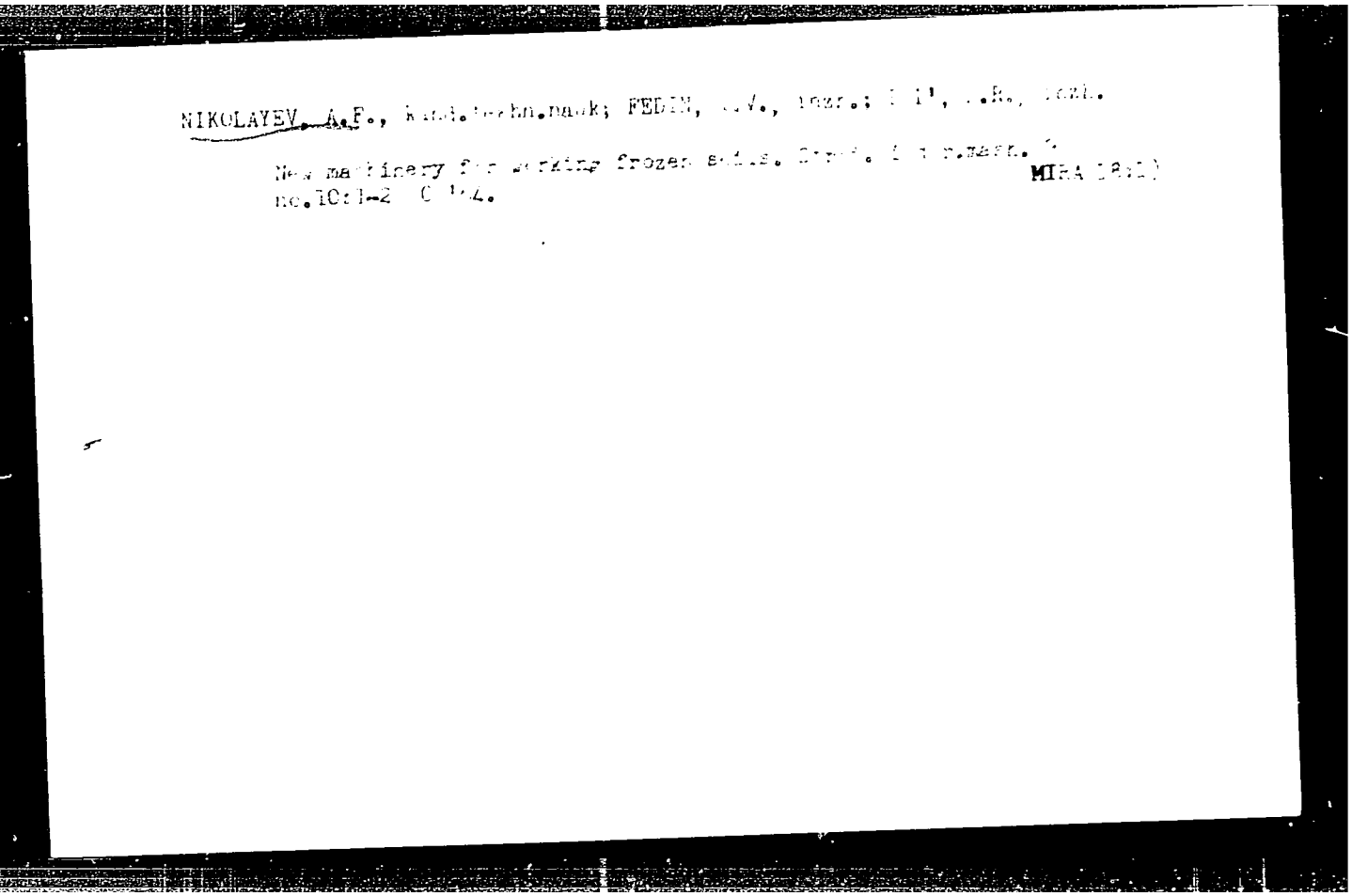
chamber reach the snow through perforations in the cylindrical top plate of the heating plate. The external stays of the deep vibration plate have passages to provide the hot gas to the plate while the center stay is provided with a device, for example, a mechanical device, for changing the operating depth of the compacting heating plate.

ASSOCIATION: none

SUBMITTED: 24Dec62 ENCL: 00 SUB CODE: GO

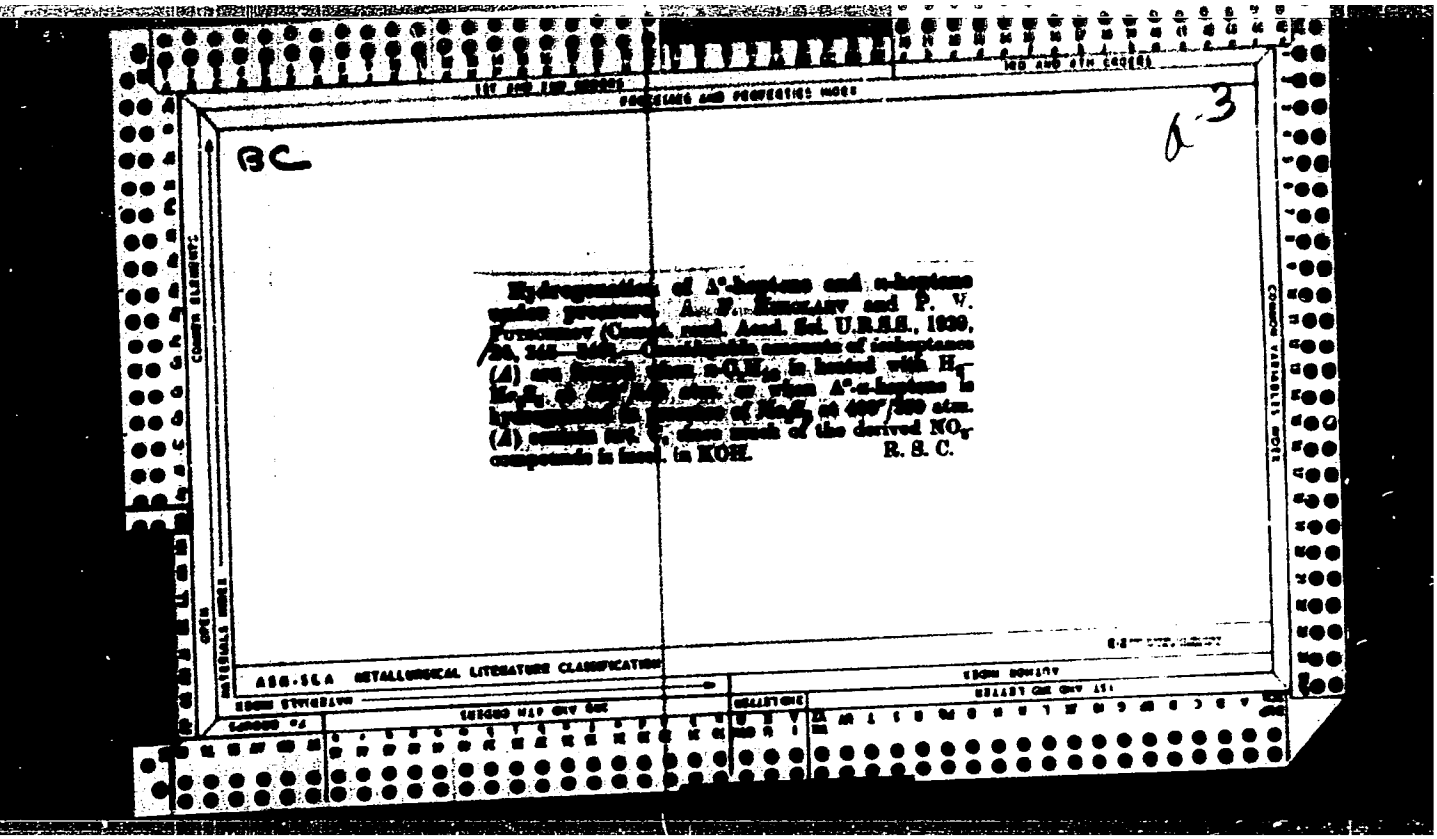
NO REF SOV: 000 OTHER: 000

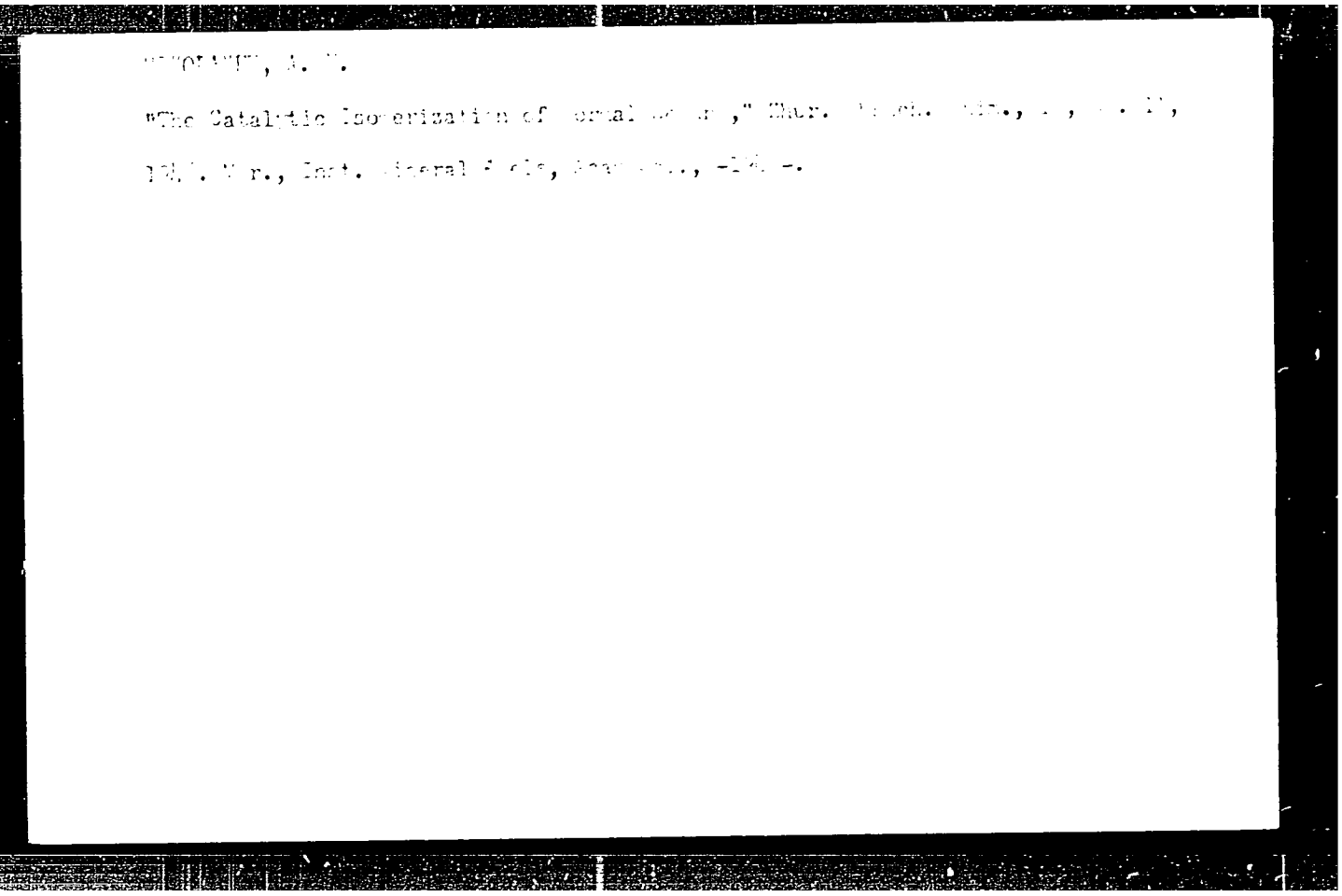
Card 2/2



NIKOLAYEV, A.F., kand.tekhn.nauk; FEDIN, [illegible], inzh.; [illegible], A.B., kand.

New machinery for working frozen [illegible]. Trud. i p.zark. no.10:1-2 O '64. MIRA 18:1





"[illegible]", A. V.

"The Catalytic Isomerization of [illegible]," Mar. [illegible], [illegible], [illegible], [illegible], Moscow, Inst. Mineral Fuels, Academy of Sciences USSR, [illegible].

NIKOLAYEV, A. F.

Dissertation: "Investigation of the Joint Polymerization of Vinylcarbazole With Esters of Vinyl Alcohol and Organic Acids (Formic, Acetic, Propionic, and Butyric)." Cand Chem Sci, Leningrad Technological Inst, Leningrad, 1953. (Referativnyy Zhurnal--Khimiya, Moscow, Feb. 1954)

SO: SUM 243, 19 Oct 54

NIKOLAYEV, A. F.

USSR/ Chemistry - Polymerization

Card 1/1 Pub. 40 - 15/25

Authors : Ushakov, [illegible] N., and Nikolayev, A. F.

Title : Polymerization and copolymerization of N-vinyl compounds. Part 1. Copolymerization of vinyl carbazole with vinyl esters

Periodical : Izv. AN SSSR. Otd. khim. nauk 1, 83-91, Jan 1956

Abstract : New hitherto unknown vinyl carbazole and vinyl ester copolymers of organic acids (formic, acetic, propionic and butyric) obtained through mass polymerization are described. The causes for the reduction in the rate of vinyl ester copolymerization followed by an increase in the length of the acid residue chain of vinyl ether are explained. The copolymerization constants were established for several vinyl base compounds and the differential and integral compositions of the vinylcarbazole copolymers were estimated. Thirty-six references: 17 USA, 6 USSR, 2 Germ., 1 French and 10 Eng. (1937-1953). Tables; graphs.

Institution : Leningrad Technological Institute im. Leningrad Soviet

Submitted : March 10, 1955

NIKOLAYEV, A F

USSR/Chemistry of High-Molecular Substances, F

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61745

Author: Ushakov, S. N., Nikolayev, A. F.

Institution: None

Title: Polymerization and Copolymerization of N-vinyl Compounds. Communication 2. On Some Characteristics of the Reaction of Copolymerization of Vinyl Acetate and Vinyl Carbazole and the Properties of the Copolymers

Original Periodical: Izv. AN SSSR, otd. khim. n., 1956, No 2, 226-231

Abstract: Rate of copolymerization of vinyl carbazole (I) and vinyl acetate (II) (temperature 80° and 100°, initiator benzoyl peroxide) passes through a minimum at a concentration of I of 10-20 mol %. At 65° and a 10-35% concentration of I polymerization does not take place. Rate of copolymerization of I and II is proportional to the square root of the concnetration of the initiator and the higher the concentration of I in the mixture the higher is the rate of

Card 1/2

USSR/Chemistry of High-Molecular Substances, F

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61745

Abstract: copolymerization; with concentrations of I >50% polymerization takes place in the absence of the initiator. By the dilatometric method determinations were made of the temperatures of vitrification T_{vit} of the copolymers and it was shown that the T_{vit} versus concentration of I curve passes through a minimum at a concentration of I of 3-10% (10-15°) and through a maximum at a concentration of 70-75% (125-130°). The best solvents for these polymers are dioxane and $CHCl_3$. Communication 1, see Referat Zhur - Khimiya, 1956, 58300.

Card 2/2

NIKOLAYEV, A. F.

Distr: 4E4j/4E2c(_)/4E3d

Polymerization and copolymerization of N-vinyl compounds. III. Synthesis of N-vinylimides of succinic, phthalic, and naphthalic acids. A. F. Nikolaev and [illegible] Urazkov (Lensovet Technol. Inst., Leningrad). Izvest. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk 1957, 1235-8; cf. C.A. 50, 13868a.—To 143 g. o-$C_6H_4(CO)_2O$ was gradually added 60 ml. $HOCH_2CH_2NH_2$ and the mixt. was heated 60–90 min. at 140° until evolution of H_2O ceased, yielding 98–9% o-$C_6H_4(CO)_2NCH_2CH_2OH$, m. 127° (H_2O), which refluxed 5 hrs. with Ac_2O gave the *acetate*, m. 90° (H_2O). This dropped into a quartz or porcelain tube at 600° gave a catalysate which on fractionation gave 85–90% o-$C_6H_4(CO)_2NCH:CH_2$, b. 143°, m. 83° ($MeOH$). Similarly was prepd. $(CH_2CO)_2NCH_2CH_2OH$, 95%, m. 58°, which gave 95% *acetate*, b. 142–5°, d_4^{20} 1.2410, n_D^{20} 1.4810, pyrolyzed to 85–90% $(CH_2CO)_2NCH:CH_2$, b. 100°, n_D^{20} 1.5020, m. 48.5° (H_2O). Similarly naphthalic anhydride gave 98% *N-(2-hydroxyethyl)naphthalimide*, m. 171°, which gave 85% *acetate*, m. 134°, pyrolyzed at 650° to 20% *N-vinylnaphthalimide*, b. 174°, m. 120°. G. M. Kosolapoff

SOV/62-58-8-9/22

AUTHORS: Nikolayev A. F., Ushakov, S. N., Rozenberg, M. E.

TITLE: Polymerization and Co Polymerization of n-Vinyl Compounds (Polimerizatsiya i sopolimerizatsiya n-vinilnykh soyedineniy) Note 4: The Polymerization of Vinyl Phthalimide (Soobshcheniye 4. Polimerizatsiya vinilftalimida)

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye khimicheskikh nauk, 1958, Nr 8, pp. 968-972 (USSR)

ABSTRACT: In publications there exist few reports on the polymerization of vinyl phthalimide. In the introduction the first experiments and the preliminary work for the production of polyvinyl phthalimide and vinyl phthalimide are discussed in short. (Ref. 4). In the present paper the authors describe the polymerization of vinyl phthalimide (in block and in the solvent). Also data on the properties of the polymer are given. The dependence of the polymerization rate of vinyl phthalimide and of the molecular weight of the polymer on the conditions of the polymerization in the presence of benzoyl peroxide and azodiisobutyro nitrile were characterized. It was found that powdery polyvinyl phthalimide produced in the polymerization

Card 1/2

Polymerization and Co-Polymerization of α-Vinyl Compounds. Note 4: The Polymerization of Vinyl Phthalimide

of the monomer in benzene is also suited for the further processing. The polymer obtained has enough hardness and heat resistance, and is soluble to a limited extent in organic substances. There are 3 figures, 5 tables, and 12 references, 3 of which are Soviet.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: January [illegible] 1957

5 (3)

AUTHORS: Nikolayev, A. F., Ushakov, S. N., Krasnosel'skaya, I. G. SOV/62-59-9-17/40

TITLE: Polymerization and Copolymerization of N-Vinyl Compounds. Communication 5. Polymerization of Vinyl Succinimide

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 9, pp 1627 - 1630 (USSR)

ABSTRACT: The present article describes the polymerization of N-vinyl succinimide (VS), which has not been previously described, and the properties of the polymers obtained are investigated. VS was prepared by a method described by the authors in reference 1, by pyrolysis from β-acetooxyethyl succinimide. The polymerization of VS succeeded only by using peroxide initiators. The polymerization was carried out at 50, 65, and 85° with 0.2% benzoyl peroxide (BP) in solid state and in solution. Figure 1 illustrates the influence of the temperature and figure 2 the influence of the concentration of the initiator on the polymerization rate. At 50° a maximum yield (98%) was obtained during 6 hours. The yield decreased with increasing temperature, but the reaction rate increased. The complete consumption of the monomer ended the polymerization. The polymer obtained is colorless, trans-

Card 1/2

parent, and becomes porous and opaque when larger quantities of BP are used. The polymerization of the solving agents (dichloroethane, benzene, methyl alcohol, and water) rapidly occurred at 85° even in diluted solving agents and the yield was good. (Table 3). As particular properties of the obtained polymers the following 2 have been established: limited solubility in organic solving agents and a low stability in water (Table 3). There are 3 figures, 4 tables, and 5 references, 3 of which are Soviet.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Institute of Technology imeni Lensovet)

SUBMITTED: January 8, 1958

5 (3)
AUTHORS: Nikolayev, A. F., Ushakov, S. N., Grinburg, R. B. SOV/62-59-9-16/40

TITLE: Polymerization and Copolymerization of N-Vinyl Compounds. Communication 6. Simultaneous Polymerization of Vinyl Succinimide and Methyl Methacrylate

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 9, pp 1631 - 1635 (USSR)

ABSTRACT: The appropriate publications have not yet discussed the copolymerization of vinyl succinimide with methyl methacrylate. The present paper describes this copolymerization and lists several properties of the copolymer. To establish the conditions of the copolymerization, the influence of the temperature (50, 65°, Fig 1), and the influence of the composition of the initial components on the rate of the copolymerization reaction was investigated (the experiment lasted 1, 2, and 3 hours, Fig 2). The investigations established that methyl methacrylate is the more active component in the copolymerization. The analysis data, table 1, show that a small part of the succinimide was consumed at the copolymerization. For the acceleration of the reaction the initiator benzoyl peroxide (BP) and azodi-isobutyronitrile (AN)

Card 1/3

were additionally applied. The data obtained (Fig 3) show that AN initiates more efficiently at low temperatures, this difference is equalized by the increase of the reaction temperatures. The authors investigated the concentration relations of the basic substances 5:1, 2:1, 1:1, 1:2. Applying the initiator BP in the ratio 1:1 of the basic component and at 65-70° a yield of 95-98% was obtained within 7-8 hours. The copolymer was a thin, porous film after the evaporation of the solvent. This film rapidly softens when warmed. The authors also investigated the molecular weight, water-repelling capacity, temperature stability, solidity, density, and tensile strength of the products obtained, and it showed that with an increase of the vinyl succinimide content the three first-mentioned values decrease, while the latter increase. The copolymer with 50% of vinyl succinimide content has a greater temperature stability at 30° than pure methyl methacrylate. There are 3 figures, 3 tables, and 4 references, 3 of which are Soviet.

Polymerization and Copolymerization of N-Vinyl Compounds. SOV/62-59-9-15/20
Communication 6. Simultaneous Polymerization of Vinyl
Succinimide and Methyl Methacrylate

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad
Institute of Technology imeni Lensovet)

SUBMITTED: January 8, 1958

Card 3/3

5(3)

AUTHORS: Usenkov, S.N., Nikolayev, A.F., Tor[illegible]

TITLE: The Synthesis of Monoalkylmaleates [illegible]

PERIODICAL: Zhurnal prikladnoy khimii, 1959, V XXXII, No [illegible] (USSR)

ABSTRACT: The derivatives of dibasic acids [illegible] and vinyl compounds. The [illegible] vestigated here. They are prepared by the reaction of maleic anhydride and primary, secondary, tertiary alcohols of the aliphatic, cyclic and aromatic series. Monoethyl maleate is obtained from maleic anhydride and absolute ethyl alcohol. It is separated from the reaction mixture by potash, ether, alcohol, dilute hydrochloric acid etc. The optimum temperature for the reaction is 80°C. A lowering of the temperature to 60°C reduces the reaction rate considerably. A temperature increase leads to decomposition of the monoester. The [illegible] esters of the maleic acid are soluble [illegible] liquids with a weak ethyl [illegible]

Card 1/2

storing but not to oxidize. Their specific weight increases with the increase of the molecular weight of the alcohol (Table 4).

There are 4 tables, 1 [illegible] references, 1 [illegible] and 3 English [illegible] and 1 Swiss.

SUBMITTED: [illegible]

25217 S/062/61/[illegible]/007/009
B117/B215

15-6050

AUTHORS: Nikolayev, A. F., Ushakov, S. N., and Daniel', M. V.

TITLE: Polymerization and copolymerization of N-vinyl compounds

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh nauk, no. 7, 1961, 1335-1336

TEXT: Information 8. Polymerization of vinyl succinimide in aqueous solution. This paper continues the study of polymerization of vinyl succinimide in aqueous solution in the presence of an initiator soluble in water. Potasium persulfate was used. Vinyl succinimide was prepared and purified by the method of Ref. 9 (S. N. Ushakov i A. F. Nikolayev, Izv. AN SSSR Otd. khim. n. 1956, 226). Potassium persulfate was analyzed according to a method suggested for determining peroxide compounds (Ref. 10: A. Schwicker, Z. analyt Chem. 74, 433 (1928)). For the polymerization of vinyl succinimide a flask with a mixer and mercury sealing, reflux condenser, and thermometer were used. A number of experiments were conducted in nitrogen atmosphere or without mixing. By adding formaldehyde (in the form of formalin, and uric acid, the length of

Card 1/3

polymerization and copolymerization ...

the polymer chains was regulated, and their cross-linking eliminated. The reaction temperature was maintained at 7[illegible] and 8[illegible] with an accuracy of [illegible]. A 10% aqueous vinyl succinimide solution was used in all experiments. The reaction was continued until a 95-98% transformation was attained. Examination of the polymerization under static conditions and with stirring showed that the rate of the process largely depends on hydrodynamic conditions. Vigorous mixing completely inhibits polymerization. Slight mixing slows the process down. At an initiator concentration of more than 0.2% and a temperature of 7[illegible]-8[illegible], the reaction proceeds fast only without mixing. Experiments in nitrogen atmosphere showed that polymerization in this case was normal with stirring and also under static conditions. Hence, it can be seen that atmospheric oxygen has an inhibitory effect on the polymerization of vinyl succinimide under the above reaction conditions, especially at temperatures below [illegible] and with stirring. It was expected that oxygen loses its inhibitory effect when the reaction temperature is elevated. Actually, polymerization of vinyl succinimide is fast at 8[illegible]-9[illegible] and at any mixing rate. At lower temperatures, however, no polymers were formed. By adding 10% or more formalin and 10% or more uric acid, a polymer forms which is soluble in

Card 2/

Polymerization and copolymerization ... 25217

chlorinated hydrocarbons, especially methylene chloride and chloroform (Table). The necessity of using chain propagators in the polymerization of vinyl succinimide indicates that the polymeric vinyl succinimide radical is most reactive. From this results its ability of propagating the chain via the polymer. By [illegible] the polymers become better soluble. [illegible] weight of the resulting polymer. The polymerization of vinyl [illegible] in aqueous solution is fast and complete in the presence of potassium persulfate. An analysis of the dependences of polymerization leads to the following conclusions. (1) In water, the water-soluble initiator decomposes into primary radicals, part of which is recombined. The greater part, however, is bound by vinyl succinimide. (2) Polymerization requires a strongly effective initiator. (3) During the reaction polyvinyl succinimide is separated from the solution. This process, however, does not affect the increase in viscosity of the reaction medium. (4) The full rate of polymerization is proportional to the square root of the initiator concentration not only in the initial stage, but also at high-degree transition. This conclusion is confirmed by experimental data in the range of the potassium persulfate concentrations examined, namely,

Card 3/5

Polymerization and copolymerization ...

from 0.1 to 5.3% of vinyl succinimide. The molecular weight of vinyl succinimide may vary according to the conditions of formation. In the experiments, the characteristic viscosity changed between 0.7 and 1.4. The viscosity of the polymers is much higher when uric acid is added than it is with formalin. Additions of β-acetoxyetnyl succinimide [illegible] material for the production of the monomer strongly affect the polymerization rate. [illegible] of it completely impedes the formation [illegible] mer. There are 2 figures, 1 table, and 12 references, 7 Soviet-bloc and non-Soviet-bloc. The three references to English-language publications read as follows: F. A. Bedey, J.M. Koltnoff, J. Amer. Chem. Soc. 68, 2743 (1947); C.E. Barnes et al., J. Amer. Chem. Soc. 7[illegible]; R. Gregg, F. Mayo, J. amer. Chem. Soc. 70, 2373 (1948).

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: July 24, 1956

Card 4/4

NIKOLAYEV, A.F.; USHAKOV, S.N.; VISHNEVETSKAYA, L.P.; VORONOVA, N.A.; RODINA, E.I.

Copolymerization of vinyl acetate and vinylphthalimide. Vysokom.soed. 4 no.7:1053-1059 Jl '62. (MIRA 15:7)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.
(Vinyl acetate) (Phthalimide) (Polymerization)

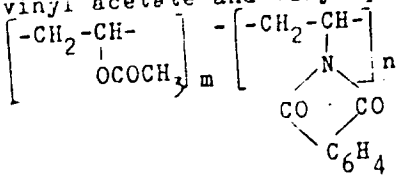
44422

S/190/62/004/010/009/010
B101/B186

AUTHORS: Nikolayev, A. F., Ushakov, S. N., Vishnevetskaya, L. P., Voronova, N. A.

TITLE: Properties of copolymers of vinyl acetate with vinyl phthalimide

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 4, no. 10, 1962, 1541-1546

TEXT: Copolymers of vinyl acetate and vinyl phthalimide (VPI) with the general composition  were studied to determine their solubility in different organic solvents, their molecular weight, vitrification temperature, Vicat heat resistance, softening point, impact strength, bending strength, and water adsorption. Copolymers obtained by

Card 1/3

Properties of copolymers of ...

simultaneous charging of the components in bulk or in solution, contained an excess of VPI - VPI bonds. Compensation copolymerization yielded copolymers with a low content of such bonds differing by their thermomechanical behavior. Results: (1) The solubility in solvents in which polyvinyl acetate is soluble, decreased as the VPI content increased; (b) the intrinsic viscosity decreased as the VPI content increased. The molecular weight of copolymers containing little VPI was determined from $[\eta] = 1.6 \cdot 10^{-4} \bar{M}_w^{0.7}$, where $[\eta]$ was measured in acetone, at 25°C, and $\bar{M}_w$ is the average-weight molecular weight. $\bar{M}_w$ of copolymers containing 14% VPI was 148100, and 146200 for 23% VPI. (3) An increase in the VPI content raised the softening point, Vicat heat resistance, and glass temperature (°C), respectively: 0 mole% VPI: 60, 37, 28; 20 mole% VPI: 75, 66, 41; 56 mole% VPI: 163, 108, 62; 98 mole% VPI: 210, 182, 135. (4) For copolymers containing 0, 23, 56, 70, and 98% VPI, the specific gravity (g/cm³) was 1.190, 1.220, 1.230, 1.235, 1.245, respectively; the water adsorption within 24 hrs (%) was 1.60, 0.7, 0.42, 0.40, and 0.39%, respectively. The Vickers Hardness number (kg/mm²) was 16-18, 15-19, 15-18, 16-19, and 18-20, respectively; the bending strength

Card 2/3

KRYLOV, A.A.; NIKOLAYEV, A.F.

Effect of I^{131} on the resistance of the erythrocytes to saponin. Med.rad. no.5:22-25 '62. (MIRA 15:8)

1. Iz kafedry voyenno-morskoy i gospital'noy terapii (nach. - prof. Z.M. Volynskiy) Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.
(IODINE--ISOTOPES) (SAPONINS--PHYSIOLOGICAL EFFECT)
(ERYTHROCYTES)

ACCESSION NR: AT4020703 S/0000/63/000/000/0114/0117

AUTHOR: Nikolayev, A. F.; Daniel', N. V.; Drosdova, T. B.

TITLE: Preparation and properties of poly-N-vinylacetamide

SOURCE: Karbotsepny*ye vy*sokomolekulyarny*ye soyedineniya (Carbon-chain macromolecular compounds); sbornik statey. Moscow, Izd-vo AN SSSR 1963, 114-117

TOPIC TAGS: polyvinylacetamide, polyvinylacetate, hydrophilic property, polarity, thermal stability, vitrification, phthalylhydrazide, polyvinylamide, polymerization

ABSTRACT: Poly-N-vinylacetamide ([η] = 1.07) was obtained by treating the phthalyl-hydrazide salt of polyvinyl amine (prepared by polymerization of N-vinylphthalimide) with acetic anhydride, after which its main physical and mechanical properties were determined. The properties of poly-N-vinyl-acetamide and polyvinyl acetate, differing from one another only in the nature of one of the atoms on the side chain, were compared. The substitution of the ester group by the NH group was found to result in products which have good hydrophilic properties, higher polarity, increased hardness, high thermal stability and a higher vitrification temperature. The conditions of the preparation of poly-N-vinylphthalimide and the phthalylhydrazide salt of polyvinylamine and the conditions for its hydrolysis with hydrochloric acid, are described in detail and the experimental data are tabulated.

Card 1/2

ACCESSION NR: AT4020703

Orig. art. has: 2 tables.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute)

SUBMITTED: 28Apr62	DATE ACQ: 20Mar64	ENCL: 00
SUB CODE: OC	NO REF SOV: 004	OTHER: 001

Card 2/2

L 13019-63 EPF(c)/EPR/EWP(j)/EWT(m)/BDS AFFTC/ASD Pr-4/Ps-4/Pc-4 RM/WW

ACCESSION NR: AP3000408 S/0191/63/000/005/0067/0068

AUTHOR: Nikolayev, A. F.; Levitskaya, O. M.; Krusentsova, L. M.; Kateel'son, Ye. Z.

TITLE: Some characteristics of an epoxy-phenol binder for SVAM

SOURCE: Plasticheskiye massy*, no. 5, 1963, 67-68

TOPIC TAGS: SVAM, epoxy-phenol binder, epoxy phenol resin

ABSTRACT: SVAM is prepared from a basic material containing 70% epoxy resin (ED-6) and 30% resol resin; its physico-mechanical properties are dependent on the composition and properties of the epoxy-phenol resin. The resin described here was obtained by combining acetone solutions of ED-6 resin (17-18% epoxy-groups) with a resol phenol-formaldehyde resin (9-10% free phenol) in a ratio of 70:30. It kept well for 60 days, but did not undergo satisfactory hardening even after 30 minutes at 140-200C. An insoluble (non-hardening) portion of 15% or more always remained, lowering the thermostability and rigidity of the material and affecting its physico-mechanical properties. It is suggested that thermosetting might be improved by modifying the composition of the epoxy-phenol resin, matching it with a special resol phenol-formaldehyde resin, and using a catalyst. Orig. art. has: 3 figures.

Card 1/2

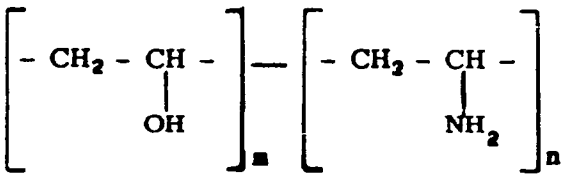
Nikolayev, A.F.

AID Nr. 980-15 31 May

COPOLYMERS OF VINYL ALCOHOL AND VINYLAMINE (USSR)

Nikolayev, A. F., S. N. Ushakov, L. P. Vishnevetskaya, and N. A. Voronova.
Vysokomolekulyarnyye soyedineniya, v. 5, no. 4, Apr 1963, 547-551.
S/190/63/005/004/011/020

Copolymers of vinyl alcohol and vinylamine (I) of varying compositions and the general formula



were prepared by reacting copolymers of vinyl acetate and N-vinylphthalimide with hydrazine hydrate at 85 to 110°C for 2 to 6 hrs, depending on the N-vinylphthalimide content of the intial copolymer. Final products containing more than 10% I were isolated by precipitating them twice from water solution poured into alcohol, and those with a higher I content, by Reynolds' method.

Card 1/2

AID Nr. 980-15 31 May

COPOLYMERS OF VINYL ALCOHOL [Cont'd] S/190/63/005/004/011/020

The final copolymers are solids soluble in solvents which will dissolve polyvinyl alcohol. Copolymers containing 12 to 44 mol % I have the following properties: glass transition temperature, 57 to 46°C; softening point, 125 to 100°C; Vicat softening point, 84 to 74°C; bending strength, 200 to 500 kg/cm^2; and Vickers hardness, 14 to 19 kg/mm^2. The glass transition temperature, heat resistance, and softening point of the copolymers drop with an increase of the amino group content. The study was carried out at the Leningrad Technological Institute imeni Lensovet. [BAO]

Card 2/2

NIKOLAYEV, A.F., red.

[New types of epoxide [illegible] Novye tipy epoksidnykh smol i kompaundov. Leningrad, 1963. 41 p. (MIRA 17:5)

NIKOLAYEV, A.F., inzh.

Size and direction of the bending of small-diameter blocks in peeling. Der. prom. 12 no.9:15 S '63. (MIRA 16:10)

S/079/63/033/002/004/009
D204/D307

AUTHORS: Nikolayev, A.F., Rozenberg, M.E., Daniel', N.V. and Tereshchenko, G.P.

TITLE: Synthesis of some derivatives of monoethanol-methylamine

PERIODICAL: Zhurnal obshchey khimii, v. 33, no. 2, 1963, 391 - 394

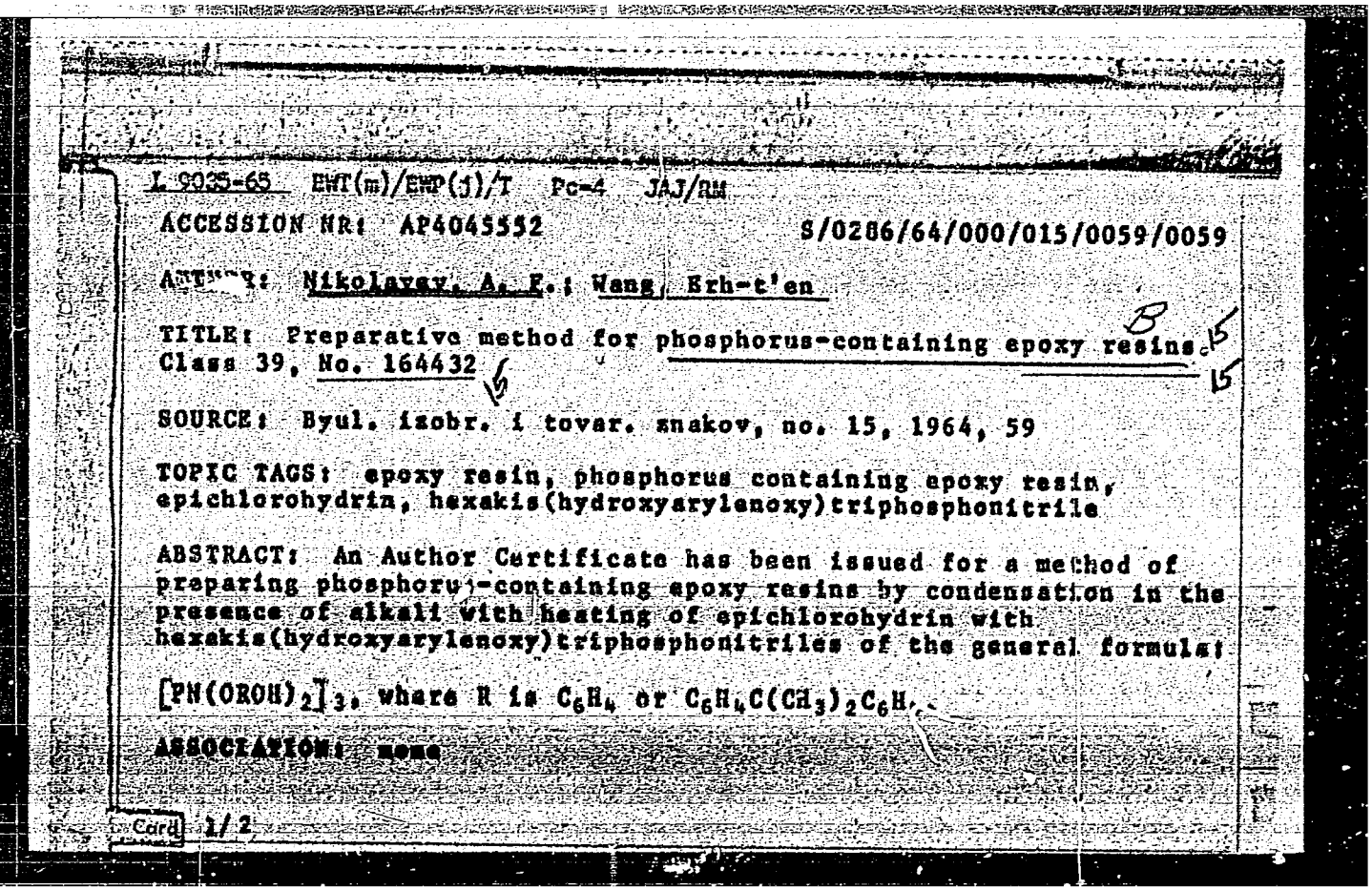
TEXT: Monoethanolmethylamine (I) was prepared by the method of Knorr and Matthes, in 53 - 55 % yield; diethanolmethylamine (II) was also obtained, in 33 - 35 % yield, as a side-product. On boiling I with ethyl acetate under reflux for 18 hrs, 20 - 25 % of the theoretical yield of β-hydroxyethyl-N-methylacetamide (III) was formed. β-Acetoxyethyl-N-methylacetamide (IV) was derived from the acetylation of I with acetic anhydride with H_2SO_4 as a catalyst, in 80 - 85 % yield. Treatment of I with HCl, with cooling, followed by evaporation to dryness, and treatment with benzene and $SOCl_2$ gave 90 - 95 % of β - chloroethyl-N-methylamine hydrochloride (V), which

Card 1/2

on boiling with benzene/acetyl chloride and distillation gave β - chloroethyl-N-methylacetamide (VI), in 90-95 % yield. Compound VI is new. All the above monoethanolmethylamine derivatives are of interest as potential starting materials for synthesis.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: November 17, 1961



L 9035-65 EWT(m)/EWP(j)/T Pc-4 JAJ/RM

ACCESSION NR: AP4045552 S/0286/64/000/015/0059/0059

AUTHOR: Nikolayev, A. F.; Wang, Erh-t'en

TITLE: Preparative method for phosphorus-containing epoxy resins. Class 39, No. 164432

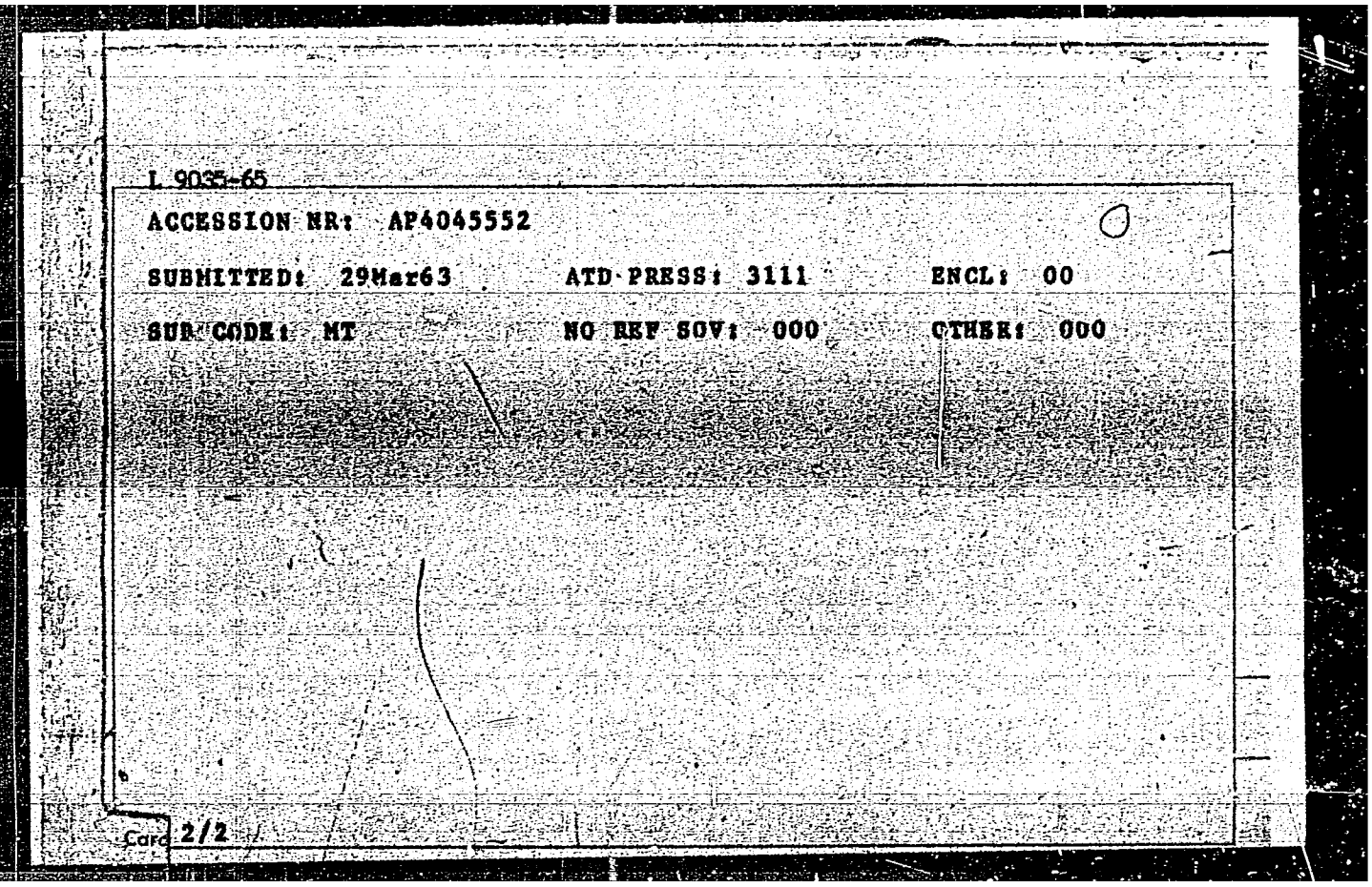
SOURCE: Byul. izobr. i tovar. znakov, no. 15, 1964, 59

TOPIC TAGS: epoxy resin, phosphorus containing epoxy resin, epichlorohydrin, hexakis(hydroxyarylenoxy)triphosphonitrile

ABSTRACT: An Author Certificate has been issued for a method of preparing phosphorus-containing epoxy resins by condensation in the presence of alkali with heating of epichlorohydrin with hexakis(hydroxyarylenoxy)triphosphonitriles of the general formula: $[PN(OROH)_2]_3$, where R is C_6H_4 or $C_6H_4C(CH_3)_2C_6H_4$.

ASSOCIATION: none

Card 1/2



L 9035-65

ACCESSION NR: AP4045552

SUBMITTED: 29Mar63 ATD PRESS: 3111 ENCL: 00

SUB CODE: MT NO REF SOV: 000 OTHER: 000

Card 2/2

L 60852-65 EPF(c)/EWP(j)/EWT(m)/T RM
ACCESSION NR: AR5013416 UR/0081/65/000/006/S072/S072

SOURCE: Ref. zh. Khimiya, Abs. 6S489

AUTHOR: Nikolayev, A. F.; Panova, L. P.; Afanas'yeva, K. S.

TITLE: Preparation and properties of polyurethane foam plastics

CITED SOURCE: Tr. Leningr. tekhnol. in-ta im. Lensoveta, vyp. 63, 1964, 76-79

TOPIC TAGS: foam plastic, polyurethane plastic, polyurethane, kerogen

TRANSLATION: The authors demonstrate the possibility of using the air-oxidation products of oil-shale kerogen for the preparation of polyester-resin foam plastics based on mixtures of unpurified and purified dibasic acids. As a curing agent, use was made of 2,4-toluylene diisocyanate or the product of its reaction with metriol (MI-14 brand); triethyl amine was used as catalyst, and OP-10 as emulsifier. In order to obtain a uniform composition, the polyester resin was thoroughly mixed with water, catalyst, and emulsifier. Then, after the curing agent was added, the entire mixture was whipped with a metal stirrer for 1-2 min at 3000 rpm and then poured in a mold lined with a polyethylene film. The foaming and the final curing

Card 1/2

L 60857-65
ACCESSION NR: AR5011416

were completed in 48 hrs. By heating up to 60-120°C the process can be accelerated. The physicomechanical properties of the samples as a function of the composition of the mixtures were also determined. Z. Ivanova.

SUB CODE: MT ENCL: 00

Card 2/2

NIKITIN, Yevgeniy [illegible], kand. [illegible], [illegible],
A.F., red.

[Technological preparation of parts from thermoplastics manufactured by the injection molding method; Tekhnologicheskaia [illegible]ost' detalei iz termoplastov, poluchaemykh metodom [illegible] pod davleniem]. Leningrad, 1964.
30 p. (MIRA 17:11)

KARDASHOV, David Alekseyevich, NIKOLAYEV, A. F., red.

[New adhesives based on synthetic polymers for joining metals to nonmetallic materials] Novye klei na osnove sin teticheskikh polimerov dlia skleivaniia metallov i ne metallicheskikh materialov. Leningrad, 1964. 18 p.
(MIRA 17:4)

NIKOLAYEV, A.F.; USHAKOV, S.N.; MISHKILEYEVA, L.S.

Copolymerization of N-vinylsuccinimide and vinyl acetate. Vysokom.soed. 6 no.2:287-291 F '64. (MIRA 17:2)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

NIKOLAYEV, A.F.; DANIEL', M.V.; TOKAREVA, A.N.; JAROA, I.; IVANOVA, N.V.

Preparation and properties of poly-N-vinylsuccinamic acid. Vysokom.soed. 6 no.2:292-296 F '64. (MIRA 17:2)

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

TRANSLATED FROM SERIAL

S/0190/64/006/003/0379/0383

ACCESSION NR: AP4030350

AUTHORS: Nikolayev, A. F.; Tereshchenko, M. N.

TITLE: Block copolymerization of N-vinylphthalimide and styrene

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 6, no. 3, 1964, 379-383

TOPIC TAGS: polymer, copolymer, copolymerization, N-vinylphthalimide, styrene, reactivity, benzoyl peroxide, copolymerization constant, solubility, intrinsic viscosity, thermal stability

ABSTRACT: The copolymerization of N-vinylphthalimide (VPI) and styrene was conducted in glass ampules (in the presence of 0.5% benzoyl peroxide) at 65 and 85C. The copolymers obtained were dissolved in methylenechloride and precipitated by methanol. The determination of nitrogen in the copolymers was conducted by Duma's method, serving as a basis for calculating their composition. It was found that when the monomers were taken in equimolar ratio the yield of the copolymer within 3 hours at 65C amounted to 6% and at 85C to 24%. It was also observed that the polymerization rate depended on the composition of the mixture of monomers. A mixture of styrene with up to 10 mole% VPI polymerizes more rapidly than pure

Card 1/2

ACCESSION NR: AP4030350

styrene. An increase in VPI in the original mixture up to 65 mole% results in a slowing down of the reaction, but with a further increase in VPI the yield of the copolymer increases again. The polymerization constant for the styrene monomer was calculated as approximating 8.3, while that of VPI was 0.075, indicating that styrene was the most active component in the copolymerization reaction. The copolymers containing up to 10 mole% VPI were soluble in the same solvents as polystyrene, becoming gradually less soluble with increased VPI content. Copolymers containing over 33% VPI were soluble in methylenechloride, chloroform, dichloroethane and pyridine, but were insoluble in aliphatic hydrocarbons, alcohols, ethers, and in formic and acetic acid, even at 70C. The vitrification temperature and thermal resistance of the copolymers increased with higher VPI content, while the water resistance and mechanical properties were decreasing. The authors suggest that a 50% VPI content may yield a copolymer with satisfactory mechanical properties. Orig. art. has: 1 formula, 1 chart, and 2 tables.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute)

SUBMITTED: 29Dec62 DATE ACQ: 07May64 ENCL: 00
SUB CODE: CH NO REF SOV: 002 OTHER: 003

Card 2/2

L 37657-65 EWT(m)/EPF(c)/EWP(j)/T/EWA(c) Pc-4/Pr-4 RPL M

ACCESSION NR: AP4047198 S/0190/64/006/010/1758/1762

AUTHOR: Nikolayev, A.F.; Rozenberg, M.E.; Zhelobayeva, S. Ya.

TITLE: Polymerization kinetics of N-vinyl tetrahydrophthalimides

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 6, no. 10, 1964, 1758-1762

TOPIC TAGS: phthalimide polymerization, tetrahydrophthalimide, vinylphthalimide, block polymerization, solution polymerization, vinylmethylphthalimide, initiator concentration, chain termination

ABSTRACT: Block or solution polymerization in dichloroethane of N-vinyl-cis-1,2,3,6-tetrahydrophthalimide (VTHPI) and N-vinyl-4-methyl-cis-1,2,3,6-tetrahydrophthalimide (VMTHPI) was studied experimentally to determine the effect of a second double bond on the polymerization kinetics. Monomers were obtained by published methods and polymerized under nitrogen in sealed glass vessels in the presence of azodiisobutyronitrile or benzoyl peroxide at 65-90C. Linear dependence of reaction rates on initiator concentration was established (see Fig. 1 of the Enclosure), indicating the absence of bimolecular chain termination, and the kinetic equation

$$v = k[M]^{1.5}[I]$$

Card 1/3

L-37657-65
ACCESSION NR: AP4047198

was derived, [M] and [I] being the concentration of monomer and initiator, respectively. A proposed mechanism of chain termination involves the formation of nonreactive radicals in which the unpaired electron of a hexenic ring carbon is conjugated with the cyclic double bond, chain transfer proceeding via monomer or polymer. Substitution of methyl on the hexenic ring did not affect the activity of the monomer. Viscometric measurements indicated that neither temperature nor monomer and initiator concentration affected the molecular weight. The polymers did not soften up to 250C and lost their solubility in organic solvents on heating or after storage in air. Orig. art. has: 2 tables, 4 figures and 2 formulas.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Institute of Technology)

SUBMITTED: 21Nov63 ENCL: 00 SUB CODE: OC

NO REF SOV: 002 OTHER: 005

Card 2/3

L 10760-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4/Pa-4 RPL RM/JW

ACCESSION NR: AP4047210 S/0190/64/006/010/1825/1828

AUTHOR: Nikolayev, A. F.; Bondarenko, V. M.

TITLE: Reaction of polyvinylamine with benzaldehyde, salicylaldehyde and furfural

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 6, no. 10, 1964, 1825-1828

TOPIC TAGS: polyvinylamine, polymeric Schiff base, Schiff base, benzaldehyde, salicylaldehyde, furfural, polyalkylidenevinylamine, polyarylidenevinylamine

ABSTRACT: The authors describe the preparation and properties of polymeric Schiff bases obtained by the interaction of polyvinylamine with benzaldehyde, salicylaldehyde and furfural. The three new polymers: poly-N-benzylidenevinylamine (PBVA), poly-N-furfurylidenevinylamine (PFVA) and poly-N-salicylidenevinylamine (PSVA) were prepared by mixing equimolar alcoholic solutions of polyvinylamine with the corresponding aldehyde at either 65-70C (one hour) or room temperature (24 hours). After drying in powder form, the purified polymers were insoluble in water but soluble in benzyl alcohol, dimethylformamide and glacial acetic acid. PSVA and PFVA were also soluble in ethyl alcohol and pyridine. In glacial acetic acid, all 3 polymers showed an abnormal dependence of viscosity on concentration; this is characteristic of polyelectrolytes due to the presence of an electron-attracting

Card 1/2

L 10760-65
ACCESSION NR: AP4047210

N atom in the polymer chain which is able to attract moving hydrogen ions. The glass temperature and yield point were higher for PSVA (80 and 200C) than for PBVA (60 and 180C) or PFVA (70 and 190C). The elasticity of all 3 polymers was practically the same at 120C; at 140C, however, the degree of deformation was 13% for PBVA, 20% for PFVA and 26% for PBVA. The rigidity of the molecular chains increased in the following order: PBVA < PFVA < PSVA. The polymers are readily hydrolized in dilute mineral acids at the -N=CH- bond, and more difficultly hydrolized in dilute alkali. The C, N, and H analysis for each polymer is presented. Orig. art. has: 2 figures, 1 table and 1 structural formula.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Technological Institute)

SUBMITTED: 09Dec63 ENCL: 00 SUB CODE: OC, MT

NO REF SOV: 007 OTHER: 005

Card 2/2

L 12004-65 EPA(s)-2/EWT(m)/EWP(j)/EPF(c)/T Pc-4/Pr-4/Pt-10 RPL RM

ACCESSION NR: AP4047211 S/0190/64/006/010/1829/1831

AUTHOR: Bondarenko, V. M.; Nikolayev, A. F.; Makarov, K. A.

TITLE: Coordination polymers based on poly-N-salicylidenevinylamine

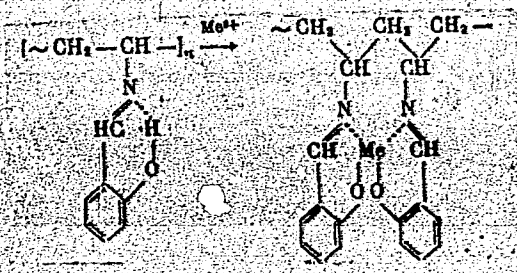
SOURCE: Vysokomolekulyarnyye soyedineniya, v. 6, no. 10, 1964, 1829-1831

TOPIC TAGS: coordination polymer, chelate polymer, polysalicylidenevinylamine

ABSTRACT: Communication 2 of the series "Polyvinylamine and its derivates" reports the synthesis and properties of 5 coordination polymers based on poly-N-salicylidenevinylamine (I). The coordination polymers were prepared by reacting solutions of I in dimethylformamide and acetates of divalent metals with coordination number 4 (Cu, Fe, Co, Ni, and Zn) in stoichiometric ratio:

Card 1/2

L 12004-65
ACCESSION NR: AP4047211



The coordination polymers were amorphous colored powders insoluble in the common solvents, except the Cu- or Ni-containing polymers, which were soluble in dimethylsulfoxide. They softened above 250, and their weight loss after 2 hr at 250C in air was 5-10%. Their thermal stability depended on the metal present, decreasing in the order:

$$Cu^{2+} > Co^{2+} > Ni^{2+} > Zn^{2+} > Fe^{2+}.$$

Orig. art. has: 1 figure, 1 table, and 1 formula.

Card 2/3

L 12004-65
ACCESSION NR: AP4047211

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Technological Institute)

SUBMITTED: 09Dec63 ATD PRESS: 3120 ENCL: 00

SUB CODE: OC NO REF SOV: 007 OTHER: 004

Card 3/3

ACCESSION NR: AP4042084 S/0079/64/034/006/1831/1832

AUTHOR: Nikolayev, A. F.; Wang, Erh-t'en

TITLE: The production and properties of hexa (aminoalcilamino) triphosphonitriles

SOURCE: Zhurnal obshchey khimii, vol. 34, no. 6, 1964, 1831-1832

TOPIC TAGS: aliphatic polyamine, dioxane, reaction agent, hydrogen chloride salt, viscous liquid

ABSTRACT: The authors studied the reaction of aliphatic polyamines with triphosphonitrylchloride and established a means for producing hexa-derivatives of triphosphonitryles. Polyamines were used in heavy concentrations in comparison to triphosphonitrylchloride; a dioxane was used as the reaction agent. The resultant compound is a viscous liquid which is soluble in water and the simple alcohols, and form a hydrogen chloride salt which is not soluble in alcohol.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lensoveta (Leningrad Institute of Technology)

ACCESSION NR: AP4042084

SUBMITTED: 17Oct62 ENCL: 00

SUB CODE: IC NO REF SOV: 000 OTHER: 004

Card 2/2

ACCESSION NR: AP4042085 S/0079/64/034/006/1833/1835

AUTHOR: Nikolayev, A. F.; Wang, Erh-t'en

TITLE: Hexa (hydroxyalkylhydroxy) triphosphonitryles

SOURCE: Zhurnal obshchey khimii, vol. 34, no. 6, 1964, 1833-1835

TOPIC TAGS: glycole, dissociation products, infusible resin, non soluble resin, hexatriphosphonitryle

ABSTRACT: This paper examines the reaction products of triphosphonitrylchloride with ethylene, 1,4-butylene, diethyleneglycoles, and glycerene. The authors established that hexahydroxyalkylhydroxytriphosphonitryles possess the property of fire extinguishment; when heated above 110° a portion of glycole and other dissociated products are isolated. This process is accompanied by the formation of infusible and non-soluble resins.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut imeni Lenosoveta (Leningrad Institute of Technology)

1/2

Card

NIKOLAYEV, A.F., ROZENBERG, M.E.

N-vinyl imides of unsaturated dibas. acids. Zhur. ob. khim. 34 no.[illegible] (MIRA [illegible])

1. Leningradskiy tekhnologicheskiy institut imeni Lensoveta.

NIKOLAYEV, A.F.; DANILOV, L.V.; [illegible]

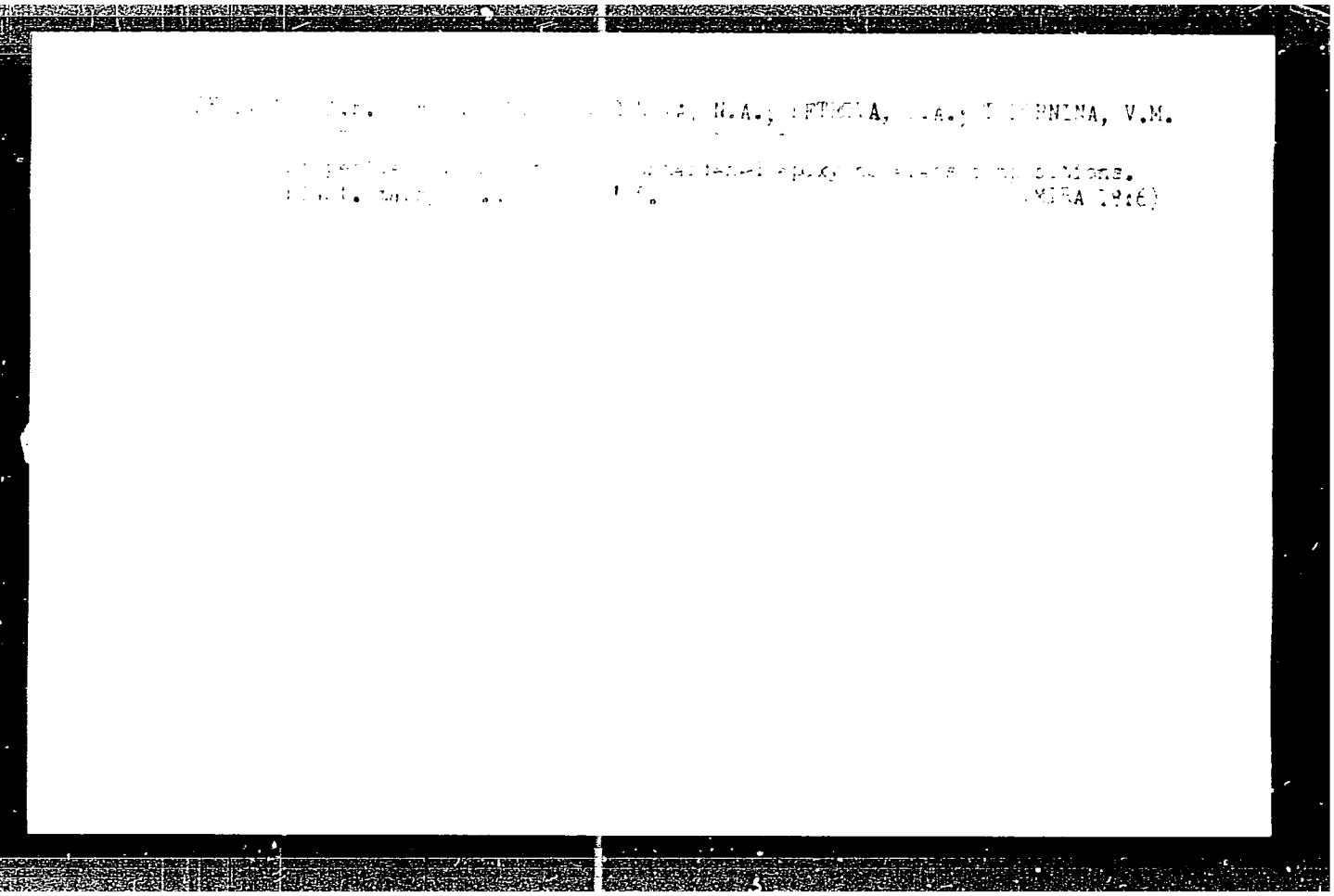
Reaction of amines with 1-vinyl[illegible] Zhur. prikl. khim. 36 no.9:2083-2084 S '63.

1. Leningradskiy [illegible]

MEYYA, N.V.; NIKOLAYEV, A.F.

Synthesis of 1,4-di(alkenyl) benzenes and their [illegible].
Khim. i no.2:296-299 F '65. (MIRA 18:4)

1. Tekhnologicheskiy institut imeni Lensoveta.



L 35521-65 EWT(m)/EPF(c)/EPF/EWP(j)/T Pc-4/Pr-4/Pu-4 RPL WW/RM
ACCESSION NR: AP5008200 S/0286/65/000/005/0071/0071

AUTHORS: Nikolayev, A. F.; Zyryanova, T. A.; Balayev, G. A.; Lebedeva, E. V.; Afanas'yeva, K. I. 34 6

TITLE: A method for producing polyphosphonitrile chloride esters. Class 39, No. 168879 6

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 71

TOPIC TAGS: polyphosphonitrile chloride, ester, aliphatic compound, aromatic compound

ABSTRACT: This Author Certificate presents a method for producing polyphosphonitrile chloride esters by condensing polyphosphonitrile chloride with polyhydroxyl compounds of the aliphatic or aromatic series during heating in the presence of an alkaline agent. In order to expand the raw-material base and to simplify the technology of the process, a mixture of phosphonitrile chloride oligomers $(PNCl_2)_n$ (n = 3-12) is used as the initial polyphosphonitrile chlorides, and caustic alkalies are used as the alkaline agent.

ASSOCIATION: none

SUBMITTED: 09Jan64 ENCL: 00 SUB CODE: OC

NO REF SOV: 000 OTHER: 000

Card 1/1

L 35466-65 EPF(c)/EPR/EWP(j)/EWT(m)/EWG(m)/T Pc-4/Pr-4/Ps-4 RPL RM/RWH/WW

ACCESSION NR: AP5003831 S/0190/65/007/001/0101/0107

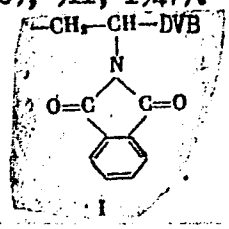
AUTHORS: Skondak, I.; Nikolayev, A. F.

TITLE: Synthesis of weakly basic anion exchangers based on vinylamine-divinylbenzene copolymers

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 1, 1965, 101-107

TOPIC TAGS: anion exchanger, vinylamine, divinylbenzene, copolymer, ammonolysis

ABSTRACT: Weakly basic anion exchangers of high exchange capacity, ranging from 10.6-11.75 mg - equ/g based on vinylamine-divinylbenzene copolymers have been synthesized by ammonolysis of hydrazine-hydrate and hydrolysis of N-phthalimide-divinylbenzene bead copolymers by the method described by D. D. Reynolds and W. O. Kenion (J. Amer. Chem. Soc., 69, 911, 1947). Based on the ammonolysis conditions of I

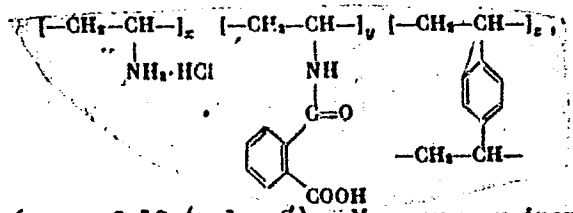


I

Card 1/3

ACCESSION NR: AP5003831

and on the divinylbenzene (DVB) content, the resulting anion exchangers had the following contents of elementary units x, y, and z



x = 84-97, y = 0.6-6, z = 3-10 (molar %). Moreover, x increased from 91 to 93, z remained constant, and y decreased from 3 to 1% as reaction time increased from 0-30 hours. Also, x decreased from 100 to 85 and z and y increased from 0-10 and 5% respectively as DVB increased from 0 to 8% molar. The exchange capacity was found to increase from K_A = 10.6 to 11.1 mg-equ/g as reaction time was increased from 0 to 30 hours, and was found to decrease from 11.8 to 9.1 as the DVB content increased from 0 to 10%. The swelling coefficient was found to increase linearly from K_H = 3 to 8 ml/ml with increased DVB content from 0 to 10%.

The swelling coefficient increased with increasing exchange capacity coefficient as follows: K_H = 2.3 ml/ml for K_A = 9.1 mg-equ/gm, 4.5 for 11 and 8.5 for 12.

L 35466-65

ACCESSION NR: AP5003831 /

The exchange capacity increased linearly with nitrogen content ("active" (amine) and "nonactive" (amide)) but was always lower than the theoretical. Orig. art. has: 4 figures, 9 formulas, and 1 table.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut im. Lensoveta (Leningrad Institute of Technology)

SUBMITTED: 14Mar64 ENCL: 00 SUB CODE: OC

NO REF SOV: 003 OTHER: 010

Card 3/3